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Topics

a) Systems Dynamical systems, Differential Equations: Ordinary Differential Equations Functional Differential Equations Partial Differential Equations Numerical Methods, Simulation Nonlinear analysis, Stability, Nonlinear oscillations, Bifurcations, Singular perturbations Fractals, Ergodic theory, Mathematical Systems Theory, Computational Intelligence (Neural Nets, Fuzzy Systems, Evolutionary Computing, Ant Colony Optimization etc...) Artificial Intelligence Knowledge Modelling, Decision Support Systems Hierarchical Control Systems Stochastic Systems, Non-linear Systems Multidimensional Systems, Multivariable systems Hybrid Systems, Multirate Systems Speech and Image Processing Systems Discrete Event Dynamic Systems Manufacturing Systems, Decentralised Systems Remote Sensing, Microelectromechanical Systems Human-Machine Systems, Image compression Scientific visualization. Applications and Special Topics

b) Control Mathematical Theory of Control Stability, Observability, Controlability, Factorizability, Reachability Linear Control, Non-Linear Control Optimal Control, Robust Control Computational Intelligence Neural Control, Fuzzy Control, Genetic Control Hybrid (Neural-Fuzzy-Evolutionary) Methodologies Intelligent Control, Stochastic Control, Discrete Control Hierarchical Control, Large Scale Systems, Adaptive Control Predictive Control, Process Control, H-infinity Control Multivariable Control, Multidimensional Control Multivariable Systems, Discrete Event Systems Re-configurable Systems, Real-Time Control Industrial Control, Control for Electric Machines Control for Power Systems, Fault Detection Simulation, Optimization, Identification Estimation, Kalman Filtering, Robotics Robotic Networks, Mechatronics Artificial Intelligence, Circuits, Devices and Systems for Automation and Control Electronics for Control, Electrical and Electronic Measurement Signal Processing for Control, Human-Machine Systems and Cybernetics Modeling and Simulation, Computer Networks for Control Internet Control, Microprocessors, Computer Architecture for Control Software tools for Control, CAD/CAM systems Applications and Special Topics

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